

Description

This Single P-Channel MOSFET has been designed using advanced Power Trench process to optimize the RDS(ON).

General Features

- Leading Trench Technology for Low RDS(on)
Extending Battery Life



Applications

- High Side Load Switch
- Charging Circuit
- Single Cell Battery Applications such as
- Cell Phones, Digital Cameras ,PDAs, etc



Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
CJ2101	SOT-323	CJ2101 ↓ 产品名称 product name	TS1	3000

Absolute Maximum Ratings (TA=25℃ unless otherwise noted)

Symbol	Parameter	Rating	Units
V _{DSS}	Drain-Source Voltage	-20	V
V _{GS}	Gate-Source Voltage	±8.0	V
I _D	Drain Current-Continuous	-1.4	A
I _{DM}	Pulsed Drain Current (tp=10μs)	-3.0	A
P _D	Power Dissipation	0.29	W
R _{θJA}	Thermal Resistance from Junction to Ambient	431	℃/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

Electrical Characteristics (TA=25℃, unless otherwise noted)

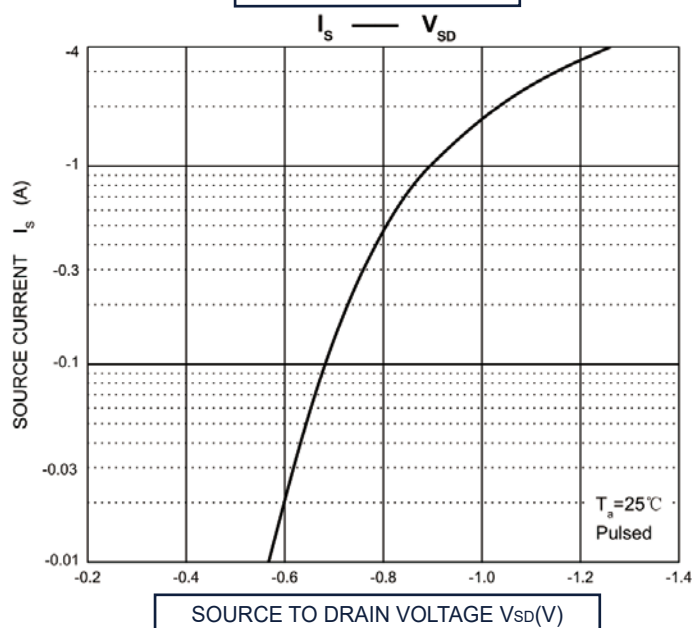
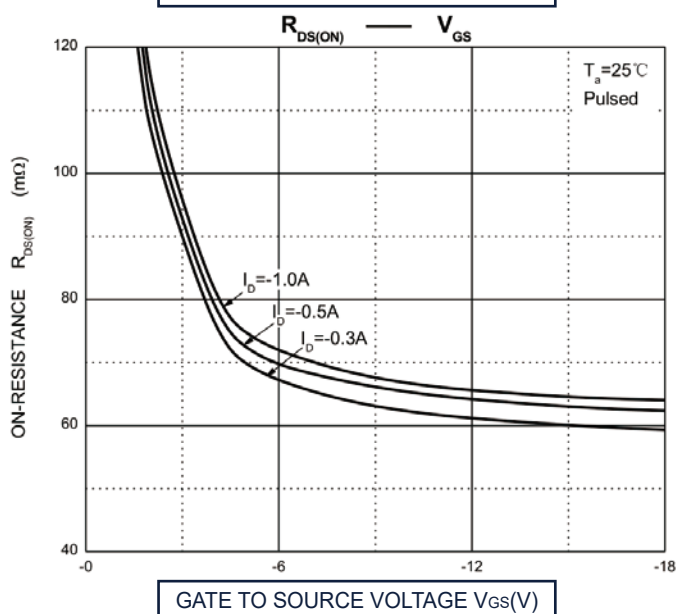
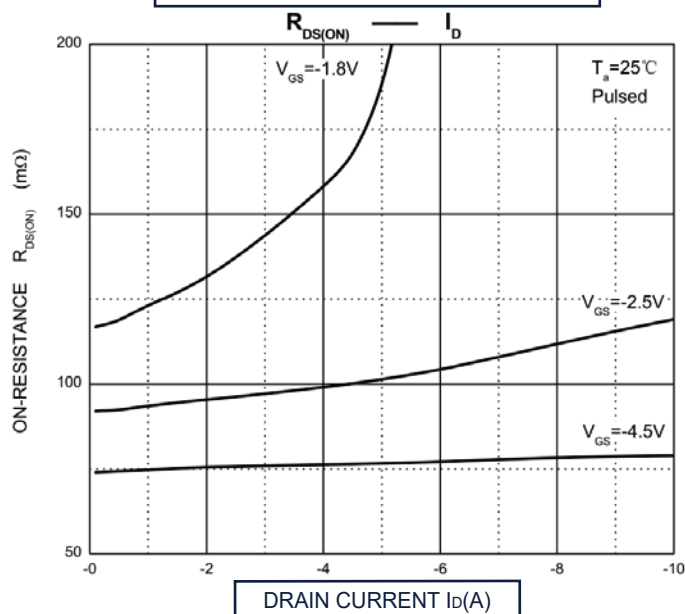
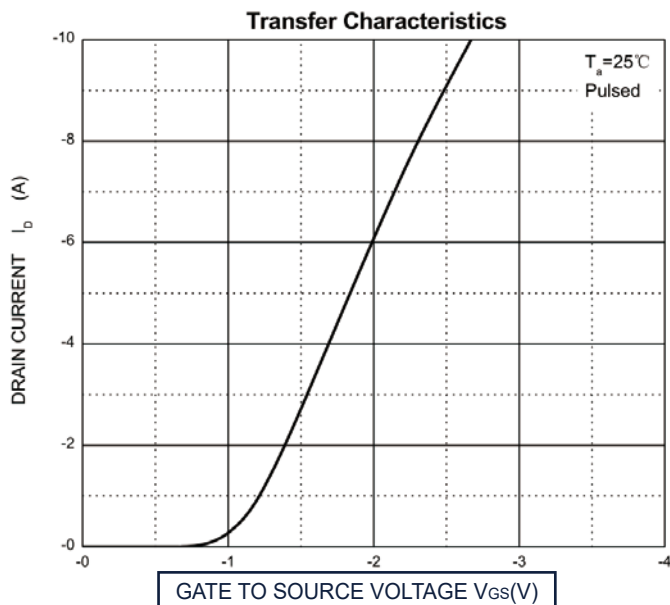
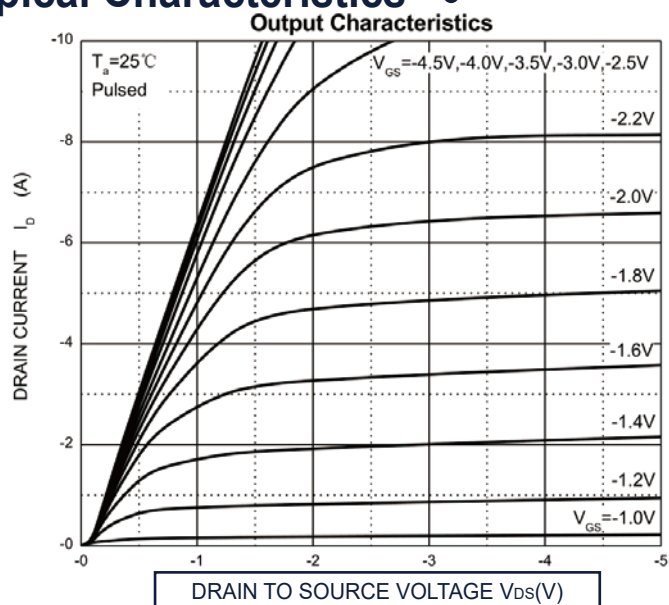
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
OFF CHARACTERISSTICS						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =-250μA	-20	---	---	V
I _{GSS}	Gate-Source Leakage Current	V _{DS} =0V, V _{GS} =±8V	---	---	±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-20V, V _{GS} =0V	---	---	-1	μA
OFF CHARACTERISSTICS (note 1)						
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =-250μA	-0.45	-0.7	---	V
R _{DS(ON)}	Drain-source on-resistance	V _{GS} =-4.5V, I _D =-1.0A	---	82	100	mΩ
		V _{GS} =-2.5V,I _D =-0.5A	---	102	140	
		V _{GS} =-1.8V , I _D =-0.3A	---	143	210	
CHARGES AND CAPACITANCES (note 3)						
C _{iss}	Input Capacitance	V _{DS} =-8.0V , V _{GS} =0V , f=1MHz	---	640	---	pF
C _{Oss}	Output Capacitance		---	120	---	
C _{rss}	Reverse Transfer Capacitance		---	82	---	
SWITCHING CHARACTERISSTICS (note 2,3)						
T _{d(on)}	Turn-On Delay Time	V _{GS} =-4.5V,V _{DD} =-4.0V, I _D =-1.0A,R _G =6.2Ω	---	6.2	---	ns
T _r	Rise Time		---	15	---	
T _{d(off)}	Turn-Off Delay Time		---	26	---	
T _f	Fall Time		---	18	---	
Q _g	Total Gate Charge	V _{DS} =-10V,V _{GS} =-4.5V, I _D =-3.0A	---	5.5	10	nC
Q _{gs}	Gate-Source Charge	V _{DS} =-10V,V _{GS} =-2.5V, I _D =-3.0A	---	3.3	6	
Q _{gd}	Gate-Drain Charge		---	0.7	---	
Drain-source Body diode characteristics						
V _{SD}	Diode Forward Voltage	I _S =-0.3A, V _{GS} = 0V	---	-0.62	-1.2	V

Notes :

- 1.Pulse Test : pulse width ≤300μs, duty cycle ≤2%.
- 2.Switching characteristics are independent of operating junction temperatures.
- 3.These parameters have no way to verify.

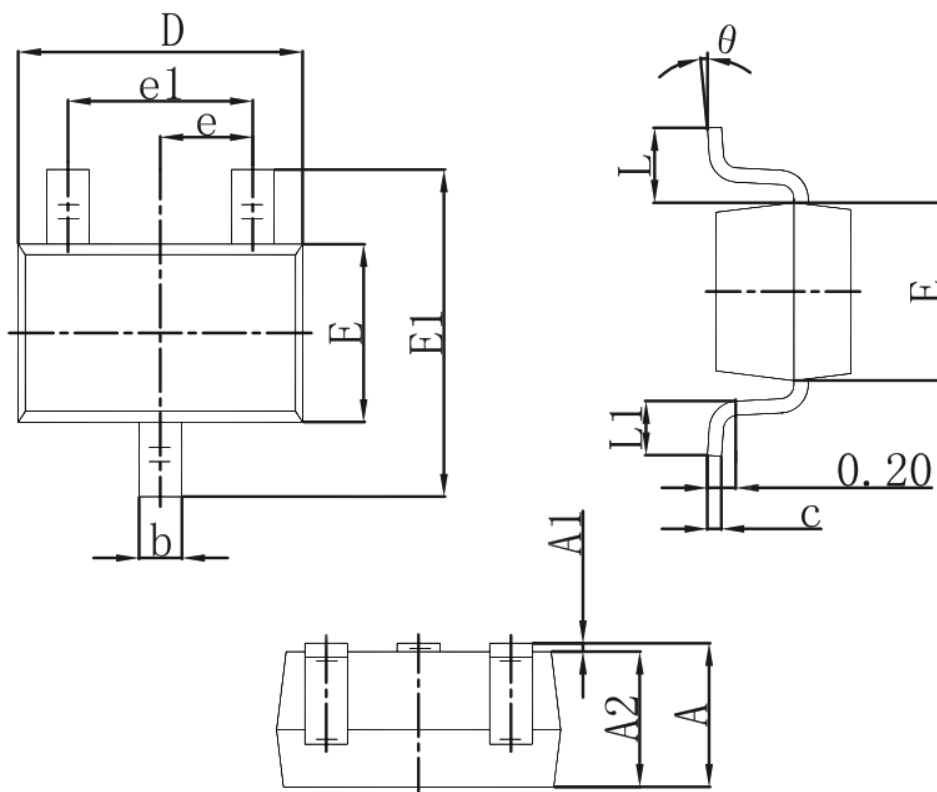


Typical Characteristics





SOT-323 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	1.350	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°